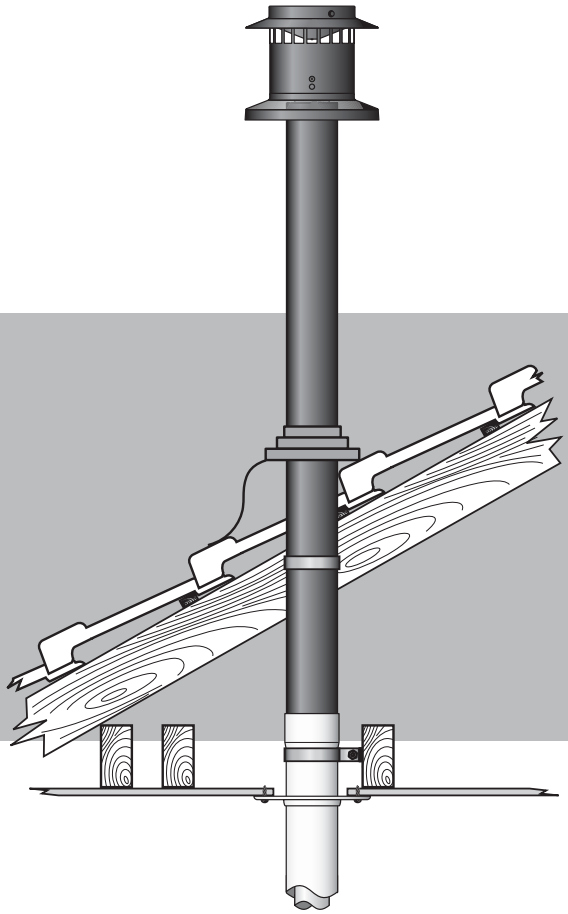
Rinnai

Flue Installation Manual



To Suit:
Rinnai Aspiration (Australia)
Rinnai Arriva (New Zealand)
RHFE-750ETR
Flame Fire Heater

Installation shall be in accordance with:

- Manufacturer's Installation Instructions
- Current AS/NZS3000, AS/NZS3500 & AS5601
- Local Regulations and Municipal Building Codes

Installation, service and removal by an Authorised Person only.

The Australian Gas Association
Proudly a member of the A.G.A. All our gas products are A.G.A. certified

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Quality Endorsed Company
ISO 9001 Lic 4983
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IMPORTANT INFORMATION

The Rinnai Aspiration (RHFE-750ETR) Co-axial flue system is certified as a component of the Aspiration Flame Fire Heater. Only an Authorised person must install, service and remove the heater and flue system.

The heater and the flue system shall be installed in accordance with:

- The requirements of AS 5601 'Gas Installations'
- Manufacturers installation instructions
- Local and Municipal building codes
- Any other relevant Statutory Regulation.

The Rinnai Aspiration Flame Fire Heater must be installed with the flue components designated in this manual. Other components, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.

This manual must be read in accordance with the Aspiration Power Flued Flame Fire Heater Operation/Installation manual supplied with the heater.

Rinnai appliance warranty conditions will be voided if non Rinnai flue components are fitted.

DESCRIPTION OF FLUE SYSTEM

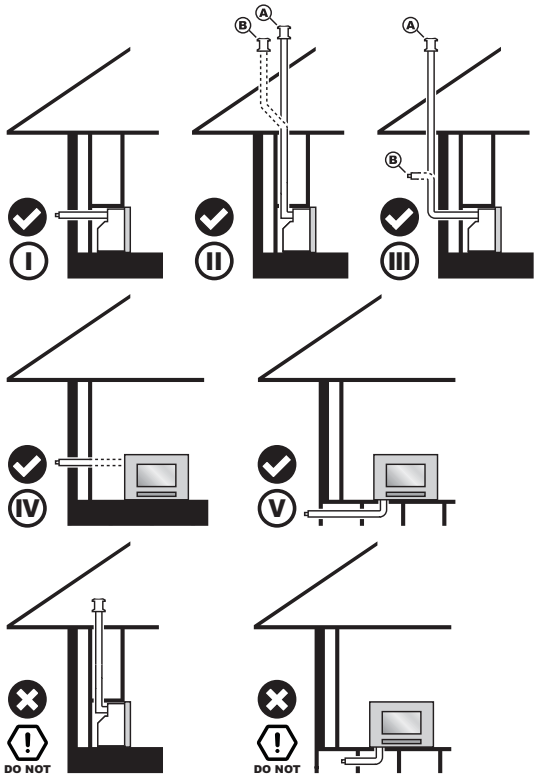
Types of Flue Installations

IMPORTANT

Consult the Rinnai Aspiration Flame Fire Customer Operation / Installation manual supplied with the heater.

Use only Rinnai Aspiration flue components with this appliance.

Options	Components	Order Codes
Ⓘ ***Direct***	'Direct Flue' Kit	ASPDFK
Ⓘ Ⓐ ***Vertical Extension***	'On Wall' Kit Co-axial Pipe 900mm* Roof Cowl Universal Wall Plate	ASPKIT03 ESPIPE900 ESROOFCOWL ESPLATE
Ⓘ Ⓑ ***Vertical Extension***	'On Wall' Kit Co-axial Pipe 900mm* Bends (2 x 45°) Roof Cowl	ASPKIT03 ESPIPE900 ESBEND ESROOFCOWL
Ⓘ Ⓐ ***Vertical Extension***	'Direct Flue' Kit Co-axial Pipe 900mm* Bends (2 x 45°) Condensate Trap Roof Cowl	ASPDFK ESPIPE900 ESBEND ESCONDK ESROOFCOWL
Ⓘ Ⓑ ***Vertical Extension***	'Direct Flue' Kit Co-axial Pipe 900mm* Bends (2 x 45°) Condensate Trap Wall Terminal Kit	ASPDFK ESPIPE900 ESBEND ESCONDK ESWTKIT
Ⓘ ***Sideways Extension***	'On Wall' Kit Co-axial Pipe 900mm * Wall Terminal Kit	ASPKIT03 ESPIPE900 ESWTKIT
Ⓥ ***Down & Out Extension***	'On Wall' Kit Co-axial Pipe 900mm* Bends (2 x 45°) Wall Terminal Kit	ASPKIT03 ESPIPE900 ESBEND ESWTKIT
** Order number of lengths as required*		



DO NOT

Flue is NOT to be terminated under the floor or in a roof space.

'Down and Out' and vertical through roof flue installations are permitted ONLY when the flue terminal is located externally.

IMPORTANT

For horizontal installations there must be a continuous fall of at least 2° to the termination point to drain condensate.

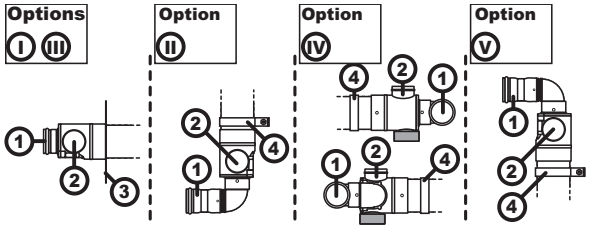
All terminations exceeding a vertical height of 1.5 metres must incorporate a condensate trap.

'Down and Out' flue systems must have a continuous fall of at least 2° to the termination point to drain condensate. Flue terminal must be at least 300 mm above the ground in accordance with AS 5601 Clause 5.13.6.2 & Fig. 5.3.

Flue System Transition Casting

The flue system transition casting provides a connection between the flue system and the heater's flue spigot and air intake hose.

A minimum 5 mm clearance from combustible materials to the transition casting is required.



This clearance is provided automatically when the 'stand off' brackets ④ that are supplied are used.

Flue system transition casting components: ① transition casting flue outlet, ② transition casting air inlet and ③ Wall plate.

DESCRIPTION OF FLUE SYSTEM

Components

Flue Terminals

- Two styles of flue terminal are available, a wall terminal and vertical terminal.

Condensate trap

- A condensate trap is required for any vertical flue system to ensure condensate generated in this section of flue during combustion is trapped and prevented from entering the combustion chamber of the Aspiration flame fire heater.

Bends

- Bends are available as a pair of 45° angle bends. If a 90° bend is required the 2 x 45° bends are joined.

Wall Plate

- Wall plates seal and secure the flue system when terminated horizontally.
- Wall plates are available as an individual item and can also be used as a ceiling plate.

Co-axial Flue Pipe

- Installed length 960 mm long. “O” ring seal jointing method. Pipe can be cut to desired length.
- Stand off clips for mounting are supplied with Co-axial flue pipe lengths.

"On Wall" Adaptation Kit

- Components to allow the Co-axial flue to run vertically or horizontally along the face of the wall within the decorative enclosure around the heater. Also used to run Co-axial flue down or sideways along the face of the wall.

TABLE OF COMPONENTS

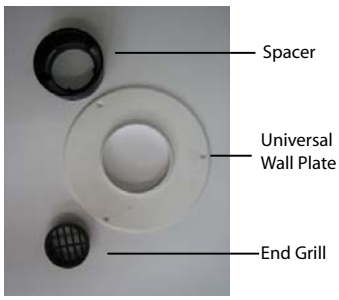
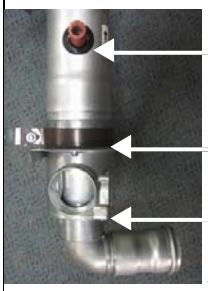
Part Number	Description	Use	Components included in kit	Addition to be purchased depending on job
ASPDFK	Direct Flue Kit	Direct through wall kit for walls up to 400 mm thick	All (ASPDFK) components Transition casting & horizontal terminal Metal internal wall plate Plastic external wall plate and Mounting screws Installation Instructions Small tub of silicone 'O' ring grease Cable tie	Co-axial pipe(s) for wall thicker than 400 mm. (ESPIPE900)
ASPKIT03	“On Wall” flue kit	Adaptation kit for running Co-axial flue on the face of wall	Condensate trap Vertical adaptation casting 2 x Mounting brackets Installation Instructions Small tub of silicone 'O' ring grease Cable tie	Roof terminal (ESROOFCOWL) Co-axial flue pipe(s) (ESPIPE900)
ESPIPE900	Co-axial flue pipe, installed 960 mm long	Obtain the desired flue length. Create horizontal terminal. Extend length of Direct Flue Kit (ASPDFK)	960 mm Co-axial flue pipe Stand off clip	
ESPLATE	Universal cover plate	Plastic cover plate suitable as a wall cover plate or a ceiling ring. Suits Energysaver & Aspiration.	Plastic wall plate and mounting screws	
ESWTKIT	Wall terminal kit horizontal	Creates a horizontal wall terminal with a Co-axial flue pipe (ESPIPE900)	Plastic external wall plate Plastic spacer sleeve Flue terminal grill - screws	
ESBEND	Bends (2 x 45°)	Change Co-ax flue pipe direction	2 x 45° Co-axial Bends	
ESCONDK	Condensate Trap	Required when using through wall vertical flue. Included as a component in the vertical “On Wall” flue kit	Condensation trap	
ESROOFCOWL	Roof Cowl or Vertical terminal	Vertical Flue Terminal	Vertical flue terminal	

IMPORTANT

- **Only the flue system components designated in this manual must be used. Components not designated in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.**

DESCRIPTION OF FLUE SYSTEM

Photos of Components

Pair 45° Bends	Horizontal Wall Terminal Kit	Universal External Wall Plate
		
Condensate Trap	**Vertical "On Wall" Flue Adaptation Kit**	**Vertical Terminal**
	 Not shown but also included: - Cable tie - Instructions - Container of 'O' Ring Grease	
Co-axial Flue Pipe (installed length 960 mm)		
Direct Flue Kit		

IMPORTANT

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DESCRIPTION OF FLUE SYSTEM

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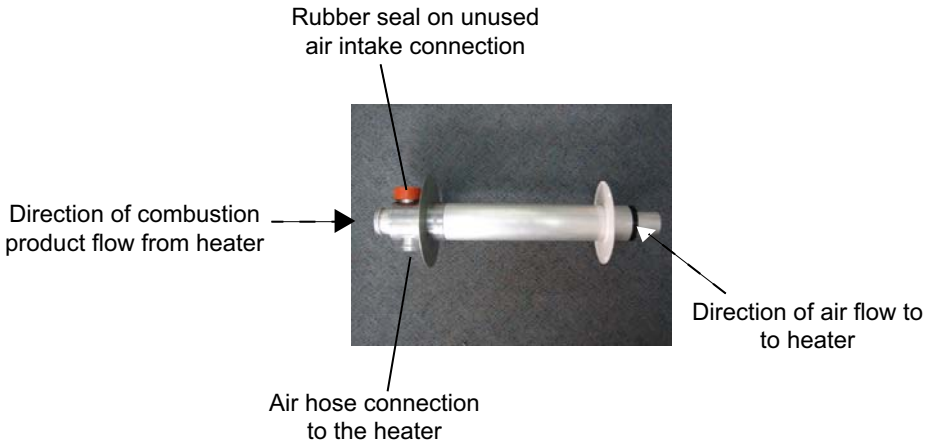
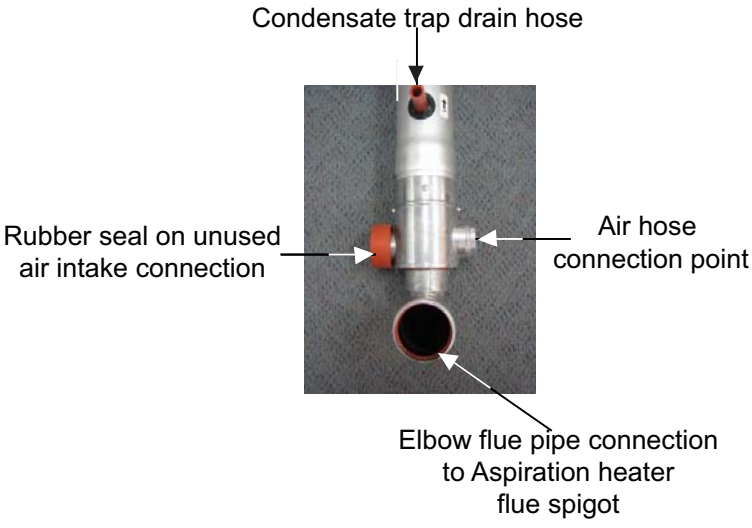
Transition casting with direct flue transition connection to heater

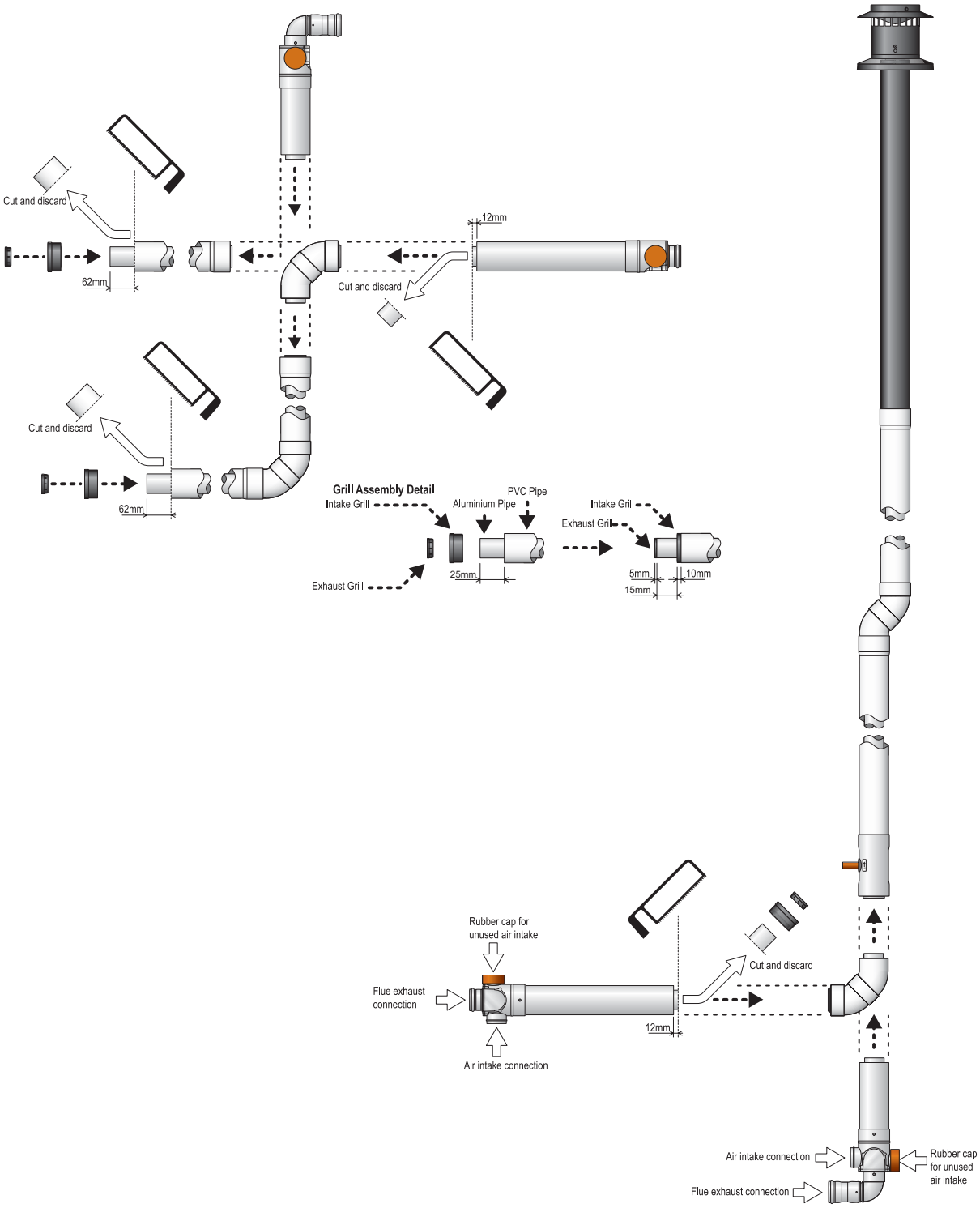


Transition casting with elbowed flue pipe connection to heater



DESCRIPTION OF FLUE SYSTEM

Exploded view of component assembly



IMPORTANT

- **Only the flue system components designated in this manual must be used. Components not designated in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.**

DESCRIPTION OF FLUE SYSTEM

Use of Silicone Grease

- The inner flue pipe joints are sealed with an 'O' ring seal.
- To ease assembly, lubricate the 'O' ring on the inner pipes prior to assembly of components using the silicone based 'O' ring grease from the plastic jar included with the direct flue kit or the 'On Wall' transition kit.

Configuration Limitations

Flue system length is limited to 6.5 metres and up to 2 x 90 degree bends can be used.

NOTE

- **The “On Wall” flue adaptation kit already contains one 90 degree bend. If this kit is used only one additional 90 Co-axial bend (ESBEND) can be used.**

DIRECT FLUE INSTALLATION

'Direct Flue' Installation (Page 4 - Option ⓘ)

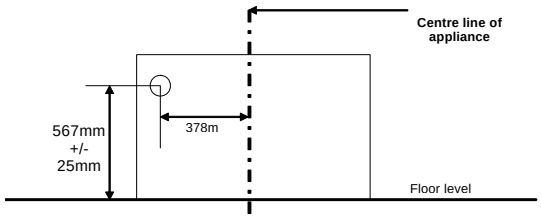
NOTE

- **Standard "Direct Flue kit" is suitable for walls up to 400 mm thick.**
- **Flue can be cut to length if the wall thickness is less than 400 mm.**
- **Flue can be extended if wall thickness is greater than 400 mm using additional lengths of Co-axial pipe.**

1. Getting started

a.) Select desired location for installing Aspiration flame fire.

b.) The flue requires a hole of 100 mm diameter. Mark the proposed penetration point through the wall - in accordance with the diagram.



IMPORTANT

- **Ensure there are no wall studs, wiring or other obstruction within the wall cavity where the flue is proposed to penetrate.**
- **Ensure the proposed location of the flue terminal can comply with the requirements of AS 5601. Fig. 5.3 from AS 5601-2004 and additional information shown in Appendix A.**

NOTE

- **For weatherboard walls, drill a centering hole through the weatherboard from the inside and then cut a 100 mm hole from the outside.**

c.) Drill the 100 mm flue penetration hole through both sides of the wall.

d.) Ensure the fastening screws between the flue pipe and transition casting on the direct flue kit are secured as shown.

IMPORTANT

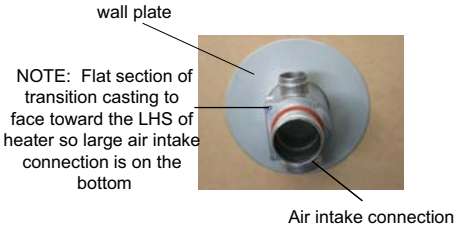
- **Ensure all connections to the transition casting on the direct flue kit are secured by the relevant screws. Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper or unsound connections can result in products of combustion dispersing into the room being heated which may lead to a dangerous condition.**

e.) Check the wall thickness to determine if the Direct Flue Kit needs to be shortened (wall is less than 400 mm thick) or extended (wall is more than 400 mm thick).

2. Shortening Direct Flue Kit

Follow Steps a.) to m.) below:

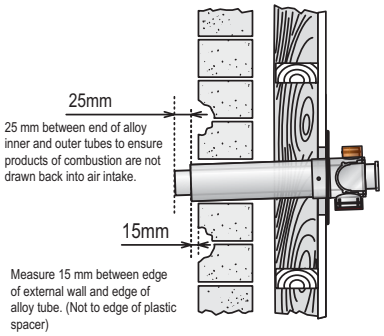
a.) Slide the round metal wall plate over the end of the direct flue terminal all the way up to the 'stops' incorporated in the transition casting. From the inside of the room, push the direct flue kit through the wall until the round metal cover plate rests firmly against the inner wall (see photo).



b.) Pull flue terminal assembly firmly through the wall from outside.

c.) Mark the outside of the flue pipe (larger diameter) allowing 15 mm past the edge of the external wall. (See photo).

d.) Mark inner flue pipe an additional 25 mm in length from the mark on the outer tube (see diagram).



e.) Remove direct flue from wall.

f.) Using a hacksaw or similar, cut off excess flue length on both outer and inner flue pipes.

IMPORTANT

Ensure that pipe cuts leave a clean, square edge and that the inner (smaller) flue pipe protrudes 25 mm further than the larger (outer) pipe.

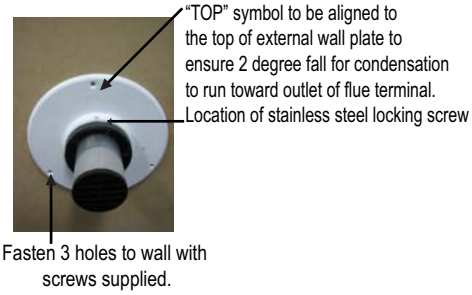
DIRECT FLUE INSTALLATION

g.) Fit black plastic flue spacer to shortened flue outlet.

h.) Fit small black plastic flue outlet grill to the newly cut inner flue pipe with the bars in a horizontal direction.

i.) Slide newly cut shortened flue pipe through wall.

j.) Slide the plastic external wall cover plate over the flue pipes on the outside of the wall, ensuring the 'TOP' symbol and mounting screw holes are on the top side of the flue. This will ensure a 2 degree fall for condensation to run towards the terminal.



k.) Pull flue terminal firmly through wall to ensure inner metal plate is hard against inside wall. Centre the outer terminal within the hole through the wall (see photo).

l.) Drill pilot hole into the outer flue pipe through the hole in the plastic cover plate. Secure plastic cover plate to outer flue pipe with stainless steel self-tapping screw supplied. Attach plastic wall plate to the outer wall with the screws supplied through the three countersunk moulded into the plastic wall plate.

m.) Make connections between flue system and heater in accordance with steps 4, 5 and 6.

IMPORTANT

- **The plastic cover plate must be secured by the screws as shown to prevent possible accidental dislodgement which could result in a dangerous situation. For additional security it is recommended that the optional 'flue guard' is fitted over the flue terminal.**

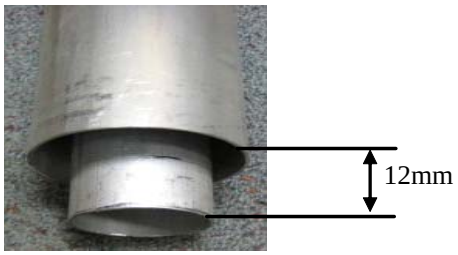
3. Extending Direct Flue Kit

Follow steps a.) to o.) below:

a.) Remove the black plastic spacer from end of direct flue. Do not discard as this will be re-used.

b.) Cut end of inner flue so it protrudes only 12 mm past the edge of the outer alloy air tube. (See photo).

c.) Ensure end is cut square and there are no sharp or rough edges.



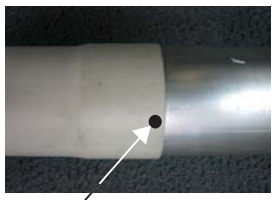
NOTE

Do not discard the black plastic spacer. It will be re-used later.

d.) File edge of inner flue pipe to create a smooth bevelled edge that will allow easy engagement of "O" ring seal of the mating part.

e.) Apply light coat of "O" ring lubricant to "O" ring prior to assembly.

f.) Fit a length of Co-axial flue pipe to the cut end of the Direct Flue Kit. Secure the outer pipes together using a rivet or self tapping screw (12 mm length) through the area where the two outer pipes join as shown. Repeat for all subsequent lengths of Co-axial flue pipe fitted.



IMPORTANT

- **Pop rivet(s) or self tapping screw(s) are fitted to prevent accidental or erroneous dislodgement of the outer flue pipe(s) after installation which could result in a dangerous situation. Otherwise accidental or erroneous dislodgement could occur as a result of future servicing the Rinnai Aspiration heater or as a result of other activities in the vicinity of the heater or flue system.**

g.) Cut the length of outer tube so it protrudes past external wall by 15 mm (as shown).

h.) Cut inner flue pipe so it protrudes past the outer tube by 25 mm (as shown).

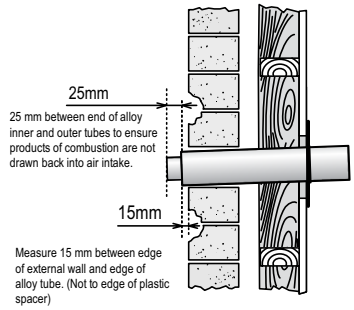
i.) Refit previously removed inner black plastic flue spacer.

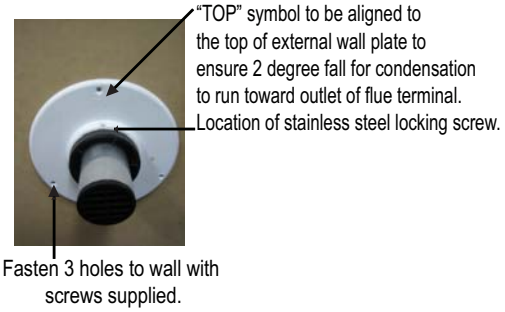
j.) Fit wall plate to wall, using the screws provided through the three countersunk holes molded in plastic wall plate. Ensure the Co-axial flue pipe is centered within the 100 mm hole and the 'TOP' symbol on plastic wall plate is facing toward the top.

k.) Pull flue assembly through wall and drill pilot hole through edge of plastic wall plate and into the outer pipe of the Co-axial flue.

l.) Secure plastic wall plate to outer Co-axial flue by use of stainless steel screw provided.

m.) Align flue grill so the bars are in a horizontal format.





IMPORTANT

- **The plastic cover plate must be secured by the screws as shown to prevent possible accidental dislodgement which could result in a dangerous situation. For additional security it is recommended that the optional 'flue guard' is fitted over the flue terminal.**

n.) Gently tap in flue grill into small flue pipe.

o.) Make connections between flue system & heater in accordance with steps 4, 5 and 6.

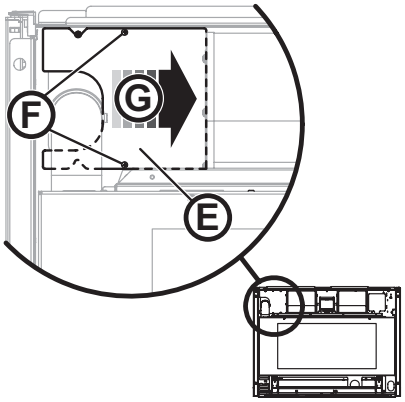
4. Access to flue connection at the Heater

To gain access to flue connection location at the heater:

a.) Remove the front cover and burner glass cover of the heater.

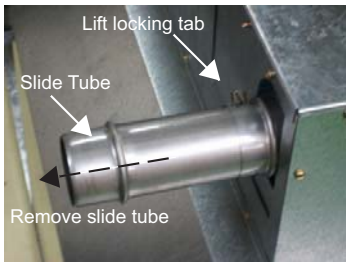
b.) Remove 2 x self tapping screws from the flue access panel located in the top left hand corner of the rear panel of the appliance enclosure.

c.) Slide cover plate to the right.



5. Connecting and securing metal flue spigot from heater to flue

a.) Lift locking tab from slide tube assembly on heater. Remove slide tube from flue pipe on heater.

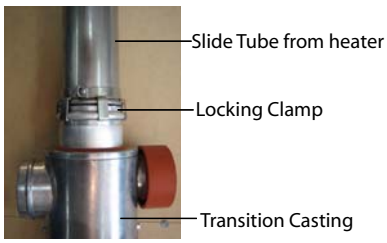


DIRECT FLUE INSTALLATION

b.) Fit flue slide tube into the flue system transition casting.

c.) Secure flue slide tube to the transition casting by use of the locking clamp which is supplied with the heater (Australia) or flue (NZ). Tighten screw to secure.

The photo to the right shows the final assembly of slide tube and transition casting locked together by locking clamp.



6. Connecting air supply elbow and final flue connection

NOTE

- **Access for connections is gained by removal of flue access panel (step 4).**

a.) Position heater to allow connection of rubber elbow and air supply tube.

b.) Connect rubber elbow from the air intake hose of the heater onto the large hole on air inlet tube of the flue transition. Secure with cable tie. Ensure blanking cap is fitted to the unused socket on transition casting. (see photo).

c.) Locate heater at the opening of the enclosure and connect gas pipe. In accordance with the instructions supplied with the heater. Check for gas escapes.

d.) Re-fit side cover panel.

e.) Re-fit side access panel four retaining screws then push the front edge of the panel close.

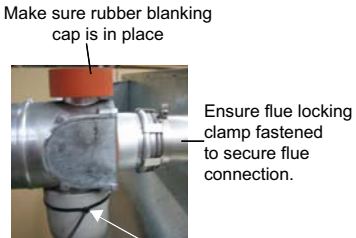
f.) Slide heater into enclosure. Be careful not to kink the braided flexible gas hose.

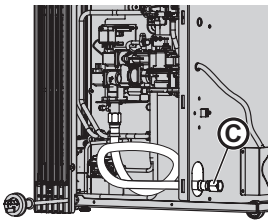
g.) Reach through open rear slide panel, to slide flue outlet from heater into the flue slide tube protruding from the flue transition casting.

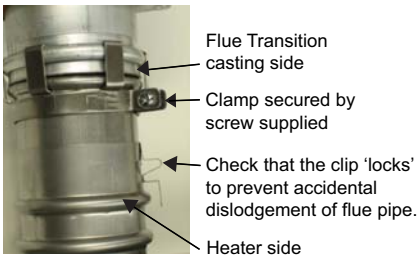
h.) Ensure the two stainless steel flue sections are pushed together & engage with the locking clip.

i.) Slide flue access panel on top LHS of heater to the left to close. Replace 2 x screws to secure.

j.) Secure heater via 2 x screws on the left and right hand sides. (2 screws per side) in accordance with Operation/Installation instructions supplied with the heater.







IMPORTANT

- **Ensure the flue outlet from the heater is properly secured to the flue connection on the transition casting using the clip and clamp provided. If this joint is not secured properly products of combustion could disperse into the room being heated which may result in a dangerous condition.**
- **Ensure the elbow of the air intake hose is properly secured to the air intake connection on the flue system transition piece using a cable tie and that the rubber blanking cap is placed over the unused air intake connection of the transition casting.**

VERTICAL ON WALL FLUE INSTALLATION

'Vertical On Wall' Flue Installation - (Page 4 - Options ⓘⓘa. and ⓘⓘb.)

This flue system is used when the flue is to be run vertically up the face of the rear wall of the heater enclosure to either a horizontal or vertical terminal.

NOTE

- **The 'On Wall' flue kit is not suitable for installation inside a wall cavity.**

1. Components

The (ASPKIT03) components are shown in the photo.
Additional components which need to be obtained:

- Lengths of Co-axial flue pipe (ESPIPE900)
- Flue terminal (Vertical or Horizontal)
- Universal cover plate (ESPLATE)

Not shown but also included:
- Cable tie
- Instructions
- Container of 'O' Ring Grease

2. Assembly of 'On Wall' Adaptation Kit

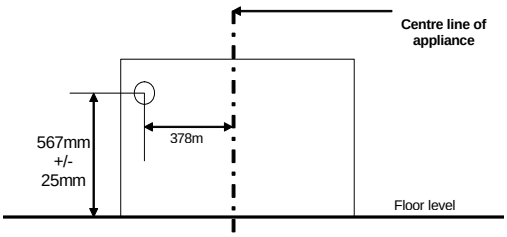
(Apply light coat of "O" ring seal to "O" rings prior to assembly).

a.) Assemble components as shown in photo above.

b.) Ensure arrown on condensate trap is facing the correct way (up).

c.) Mark centre of heater flue pipe on rear wall. (See diagram).

d.) Ensure the location of the flue terminal can comply with the requirements of AS 5601. Figure 5.3 from AS 5601-2004 and additional information are shown at Appendix A.



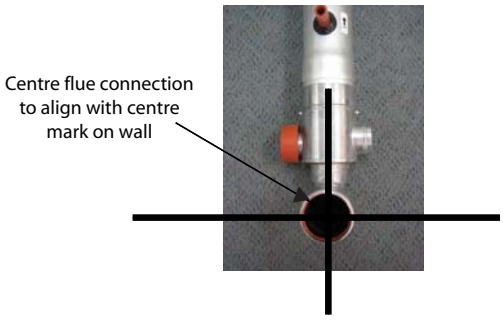
IMPORTANT

- **Ensure the components of the 'On Wall' adaptation kit are securely fastened to the transition casting by the screws and rivets. Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper or unsound connections can result in products of combustion dispersing into the room being heated which may result in a dangerous condition.**

e.) Using mounting bracket supplied, mount vertical "On Wall" transition so the centre flue mark on wall aligns to the centre of the flue connection (see photo).

f.) Continue to build flue using appropriate lengths of Co-axial flue pipes. Sockets of Co-axial flue pipe to be at the flue terminal end. Fit stand off clips supplied with ESPIPE900 to support the weight of the flue system.

g.) Connect the condensate drain hose from the outlet of the condensate trap to the evaporation tray located inside the Aspiration heater. Refer to section "CONNECTING THE CONDENSATE DRAIN HOSE" on page 29.



NOTE

- **A small amount of 'O' ring lubricant will assist assembly.**
- **Use PVC glue or similar between vertical joints of plastic (PVC) outer pipe to prevent ingress of water.**

h.) Terminate flue using a vertical roof terminal (ESROOFCOWL). Flue termination to comply with the requirements of AS 5601 section 5 (See Appendix A). Flash the roof penetration by appropriate methods. Roof flashing materials not included in flue kit.

VERTICAL ON WALL FLUE INSTALLATION

3. Access to flue connection at the heater

Refer to section “Access to flue connection at the Heater” on page 12.

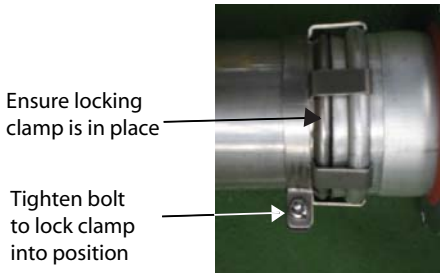
4. Connecting and securing metal flue spigot from heater to flue

a.) Lift locking tab from slide tube assembly on heater. Remove slide tube from flue pipe on heater.

b.) Fit flue slide tube into the flue system transition casting.

c.) Secure flue slide tube to the transition casting by use of the locking clamp which is supplied with the heater (Australia) or flue (NZ). Tighten screw to secure.

Photo to the right shows the final assembly of slide tube & transition casting locked together by locking clamp.



5. Connecting air supply elbow & final flue connection

a.) Position heater to allow connection of rubber elbow and air supply tube.

b.) Connect rubber elbow from the air intake hose of the heater onto the large hole on air inlet tube of the flue transition. Secure with cable tie. Ensure blanking cap is fitted to the unused socket on transition casting. (see photo).

c.) Locate heater at the opening of the enclosure and connect gas pipe. In accordance with the instructions supplied with the heater. Check for gas escapes.

d.) Re-fit side cover panel.

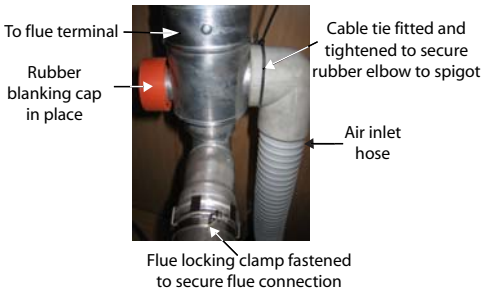
e.) Slide heater into enclosure. Be careful not to kink the braided flexible gas hose.

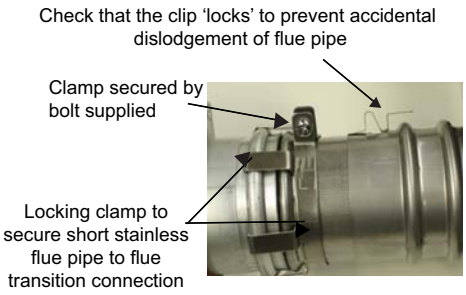
f.) Reach through open rear slide panel, to slide flue outlet from heater into the flue slide tube protruding from the flue transition.

g.) Ensure the two stainless steel flue sections are pushed together & engage with the locking clip.

h.) Slide flue access panel on top LHS of heater to the left to close. Replace 2 x screws to secure.

i.) Secure heater via 2 x screws through on the left and right hand sides. (2 screws per side) in accordance with the customer/installation instructions supplied with the heater.





IMPORTANT

- **Ensure the metal flue outlet from the heater is properly secured to the flue connection on the transition casting using the clip and clamp provided. If this joint is not secured properly products of combustion could disperse into the room being heated which may result in a dangerous condition.**
- **Ensure the elbow of the air intake hose is properly secured to the air intake connection on the flue system transition piece using a cable tie and that the rubber blanking cap is placed over the unused air intake connection of the transition casting.**

VERTICAL THROUGH WALL FLUE INSTALLATION

'Vertical through the Wall' Flue Installation (Page 4 - Option (iii))

This system is suitable for appliances installed against solid brick walls, or where a direct flue terminal cannot be used.

1. Components

- Direct flue kit (ASPDFK)
- Condensate trap (ESCONDK)
- 2 x 45° Bends (ESBEND)
- Suitable number of Co-axial flue pipes (ESPIPE900)
- Vertical terminal if required (ESROOFCOWL) Horizontal termination is also possible.

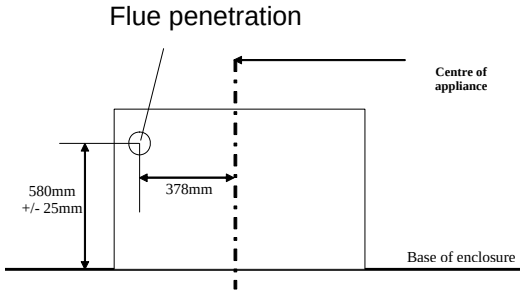
NOTE

- **Maximum flue length not to exceed 6.5 metres.**

2. Installation of 'Horizontal section' of through wall flue

a.) Select desired location for installing Rinnai Aspiration heater.

b.) Mark the proposed flue penetration point through the wall as shown.

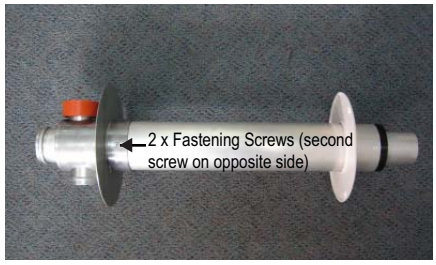


IMPORTANT

- **Ensure there are no studs / wiring or other obstructions within the wall cavity.**

c.) Ensure location of the flue terminal can comply with the requirements of AS 5601. Figure 5.3 from AS 5601-2004 & additional information are shown at Appendix A.

d.) Ensure the fastening screws between the flue pipe and transition casting of the Direct Flue Kit are secured as shown.



IMPORTANT

- **Ensure all connections to the transition casting are secured by the relevant screws. Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper or unsound connections can result in products of combustion dispersing into the room being heated which may lead to a dangerous condition.**

e.) Cut 100 mm diameter hole though wall to centre on pre location marked in step b).

f.) Check wall thickness to determine if Direct Flue Kit needs to be shortened (wall is less than 400 mm thick) or extended (wall is more than 400 mm thick).

IMPORTANT

- **The length of the direct flue kit pipes when used for a vertical through the wall installation must be at least 300 mm.**

VERTICAL THROUGH WALL FLUE INSTALLATION

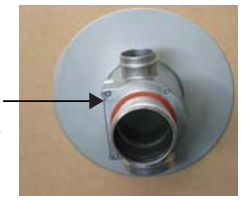
3. Shortening Direct Flue kit

follow steps a.) to j.)

a.) Slide the round metal wall plate over the end of the Direct Flue Kit and push all the way up until the round metal wall plate rests against the cast stops incorporated in the transition casting.

From inside the room, push the flue terminal assembly through the wall until the round metal wall plate rests firmly against the inner wall. (See photo).

Note: Flat section of flue to face toward to LHS of heater so large air intake connection is on the bottom



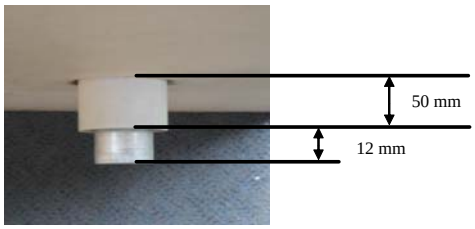
IMPORTANT

- **The length of the direct flue kit pipes when used for a vertical through the wall installation must be at least 300 mm.**

b.) Pull the flue assembly firmly through the wall from the outside.

c.) Mark the outside of the air intake pipe (larger diameter) allowing 50 mm past the edge of the external wall. (See photo).

d.) Mark the inner flue pipe (smaller diameter) to extend 12 mm past the end of the cut air intake pipe.



e.) Remove Direct Flue Kit from the wall and remove black plastic spacer. (Do not discard spacer it will be used later).

f.) Using a hacksaw or similar, cut off excess flue length on both outer and inner flue pipes.

IMPORTANT

- **Ensure that the pipe cuts leave a clean, square edge on both cuts and that the protrusion distances are correct.**

g.) Slide the newly cut flue pipes through the wall, and centre the positioning of the outer flue pipe within the hole through the wall.

h.) Slide plastic external wall cover plate over the flue pipes on the outside of the wall, ensuring the 'TOP' symbol is at the BOTTOM side of the flue. This will ensure a 2 degree fall for condensation to run TOWARDS the heater which is required ONLY for the through wall Vertical Co-axial flue installation.

"TOP" marking on BOTTOM of plastic spacer (through wall vertical co-axial installation only).

i.) Pull flue terminal firmly through the wall to ensure the round inner metal wall plate is hard against the internal wall. Centre flue within the 100 mm hole.

j.) Drill pilot hole in the plastic cover plate and into the air intake pipe. Secure the components with the self tapping stainless steel screw supplied. Attach the plastic wall plate to the wall using the screws supplied through the three countersunk holes moulded into the plastic wall plate. Ensure flue is centered within in the hole.

The installation should now look like photo on the right.

VERTICAL THROUGH WALL FLUE INSTALLATION

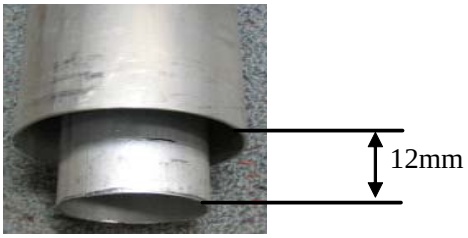
IMPORTANT

- **The horizontal section of the flue system must be secured by the screws or rivets as described to prevent possible accidental dislodgement which could result in a dangerous situation.**
- **The 'TOP' marking on the pastic cover must be at the BOTTOM for through the wall vertical co-axial flue installations only to ensure correct condensate drainage.**

4. Extending Direct Flue Kit

Follow steps a.) to m.) below

a.) Remove the black plastic spacer from the end of the Direct Flue Kit. Cut the end of the inner flue pipe so it protrudes only 12 mm past the edge of the outer alloy air tube. Ensure the cut is square and that there are no sharp edges (See photo).



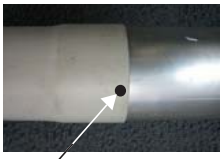
NOTE

- **Do not discard the black plastic spacer as it will be re-used later.**

b.) File the edge of the inner flue pipe to create a smooth bevelled edge that will allow easy engagement of the 'O' ring seal of the mating part.

c.) Apply light coat of "O" ring lubricant to "O" ring prior to assembly.

d.) Fit a length of Co-axial flue pipe to the cut end of the Direct Flue Kit. Secure the outer pipes together using a rivet or self tapping screw through the area where the two outer pipes join as shown below. Repeat for all subsequent lengths of the horizontal Co-axial pipe fitted.



IMPORTANT

- **Pop rivet(s) or self tapping screw(s) are fitted to prevent accidental or erroneous dislodgement of the outer flue pipe(s) after installation which could result in a dangerous situation. Otherwise accidental or erroneous dislodgement could occur as a result of future servicing the Aspiration heater or as a result of other activities in the vicinity of the heater or flue system.**

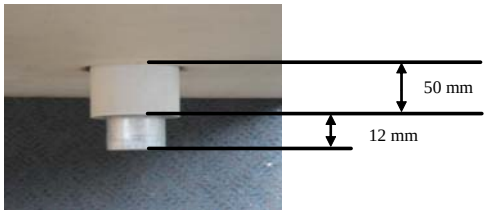
e.) Pull the flue assembly firmly through the wall from the outside.

f.) Mark the outside of the air intake pipe (larger diameter) allowing 50 mm past the edge of the external wall. (See photo).

g.) Mark the inner flue pipe (smaller diameter) to extend 12 mm past the end of the cut air intake pipe.

h.) Remove Direct Flue Kit from the wall.

i.) Using a hacksaw or similar, cut off excess flue length on both outer and inner flue pipes.



IMPORTANT

- **Ensure that the pipe cuts leave a clean, square edge on both cuts and that the protrusion distances are correct.**

j.) Slide the newly cut flue pipes through the wall, and centre the positioning of the outer flue pipe within the hole through the wall.

k.) Slide plastic external wall cover plate over the flue pipes on the outside of the wall, ensuring the 'TOP' symbol is at the BOTTOM side of the flue. This will ensure a 2 degree fall for condensation to run TOWARDS the heater which is required ONLY for the through wall Vertical Co-axial flue installation.

l.) Pull flue terminal firmly through the wall to ensure the round inner metal wall plate is hard against the internal wall. Centre flue within the 100 mm hole.

m.) Drill pilot hole in the plastic cover plate and into the air intake pipe. Secure the components with the self tapping stainless steel screw supplied. Attach the plastic wall plate to the wall using the screws supplied through the three countersunk holes moulded into the plastic wall plate. Ensure flue is centered within in the hole.

"TOP" marking on BOTTOM of plastic spacer (through wall vertical co-axial installation only).

The installation should now look like photo on the right.

IMPORTANT

- **The horizontal section of the flue system must be secured by the screws or rivets as described to prevent possible accidental dislodgement which could result in a dangerous situation.**
- **The 'TOP' marking on the pastic cover must be at the BOTTOM for through the wall vertical co-axial flue installations only to ensure correct condensate drainage.**

5. Access to the flue connection at the heater

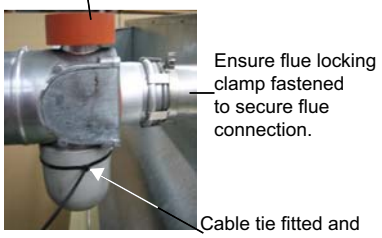
Refer to section "Access to flue connection at the Heater" on page 12.

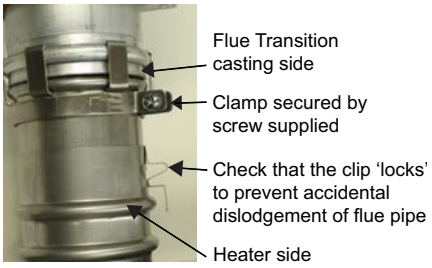
6. Connecting and securing metal flue spigot from heater to flue

Refer to section "Connecting and securing metal flue spigot from heater to flue" on page 12.

7. Connecting air supply elbow and final flue connection

Refer to section "Connecting air supply elbow and final flue connection" on page 13.





IMPORTANT

- **Ensure the flue outlet from the heater is properly secured to the flue connection on the transition casting using the clip and clamp provided. If this joint is not secured properly products of combustion could disperse into the room being heated which may result in a dangerous condition.**
- **Ensure the elbow of the air intake hose is properly secured to the air intake connection on the flue system transition piece using a cable tie and that the rubber blanking cap is placed over the unused air intake connection of the transition casting.**

VERTICAL THROUGH WALL FLUE INSTALLATION

8. Installing vertical section of 'Through Wall' Flue

a.) Cut the black plastic spacer and fit into the ends of the horizontal flue pipe protruding through the outside wall.

Cut off raised section and discard. Refit remaining spacer into end of flue pipe.

b.) Fit the 2 x 45° bends as shown to the end of the flue protruding through the wall.

c.) Fit condensate trap to 45° bend as shown with the 'UP' marking facing that way.

d.) Run a condensate drain pipe from the red drain connection on the condensate trap in accordance with AS 3500 'National Plumbing and Drainage'.

"TOP" marking on bottom of plastic spacer to ensure 2° fall of direct flue back toward heater

IMPORTANT

- **Because the condensate is mildly acidic, Rinnai recommend Clipsal 16 mm rigid Grey UPVC or equivalent conduit and associated fittings: Grey UPVC Pipe (Catalogue # 9016MD), 90° elbow (Catalogue # 261/16).**
  Copper tube must not be used as it may corrode.

e.) The remaining Co-axial flue pipes can now be run vertically up the face of the external wall. Clip the Co-axial flue pipes to the wall using the clips provided (One clip per length of Co-axial pipe). Flue can terminate vertically or horizontally in compliance with AS 5601 (See Appendix A).

If the vertical roof terminal is used, ensure compliance with AS 5601 Section 5 (See Appendix A). Flash the roof penetration by appropriate methods. Roof flashing materials not included in flue kit. If a horizontal terminal is required, refer to Step 9 below.

NOTE

- **A small amount of 'O' ring lubricant will assist assembly.**
- **Use PVC glue or similar between vertical joints of plastic (PVC) outer flue pipe to prevent ingress of water.**

9. Creating a Horizontal Flue Terminal for a through the wall vertical flue system

Components

- Pair 45° Bends (ESBEND).
- Horizontal wall terminal Kit (ESWKIT) wall plate not used.
- Co-axial flue pipe for vertical flue length (ESPIPE900).
- Co-axial flue pipe to create horizontal flue terminal (ESPIPE900).

NOTE

- **A 'cut off' section of pipe left over can be used for this purpose.**

VERTICAL THROUGH WALL FLUE INSTALLATION

Method

- Use off-cut of Co-axial flue pipe.
- Cut inner flue 170 mm long.
- Cut outer flue 100 mm long.

a.) Using an ESPIPE900, (or off-cut from ESPIPE900) cut the alloy inner pipe to 170mm in length and the outer plastic pipe to 100 mm in length.

NOTE

- **Ensure flue is cut at the 'non socket' or free end of Co-axial flue pipe.**
- **Flue off-cuts must be cut square and left with a smooth beveled edge.**
- **A small amount of 'O' ring lubricant on rubber seals will assist assembly.**

b.) Fit the 170 mm inner flue pipe to inner ESBEND and secure with either a 12 mm long screw or rivet. (See photo).

c.) Fit the additional inner alloy ESBEND to create a 90° bend. Secure with a screw or rivet. (See photo).

d.) Slide 100 mm long plastic outer plastic flue over the end of the 170 mm long inner alloy flue.

e.) Slide pair of plastic outer ESBEND components over the end of the pair of alloy inner ESBEND components.

f.) Fit the inner and outer ESBEND pipes to the socket of the vertical Co-axial flue pipe.

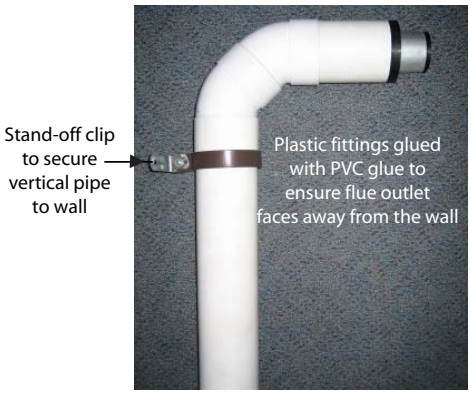
NOTE

- **A small amount of 'O' ring lubricant on rubber seals will assist assembly.**

g.) Use PVC glue between the mating plastic components (sockets) to ensure flue system security.

NOTE

- **Ensure flue terminal is facing directly away from the wall.**



h.) Slide spacer into the end of the of the outer plastic flue terminal pipe. (See photo).

i.) Gently tap end grill into end of inner alloy pipe. Bars to be installed horizontally across the end of the inner flue pipe.

NOTE

- **Use PVC glue between the mating plastic components (sockets) to ensure flue system is secure and weather proof.**

SIDEWAYS HORIZONTAL FLUE INSTALLATION

‘Sideways Horizontal’ Flue Installation - (Page 4 - Option ⓘⓥ)

The sideways horizontal flue system is used to run Co-axial flue along the left or right hand side of the internal wall behind the heater.

The flue pipes are clipped to the wall using the standoff clips supplied. It is possible to build a decorative cover around the flue pipe exposed inside the building.

NOTE

- **The decorative cover is not part of this flue kit and is not covered by these instructions.**
- **The 90° bend incorporated within the 'On Wall' transition is counted as ONE 90° Bend.**

IMPORTANT

Creating a fall within flue system:

- **Sideways horizontal flue systems should have a 2° fall toward the flue terminal to drain out any condensation.**
- **There should be a 25 mm clearance between the outer co-axial flue pipe and any decorative cover.**

Components

- 'On Wall' Kit (ASPKIT03)
- Wall Terminal Kit (ESWTKIT03)
- Co-axial pipes (ESPIPE900)
- Optional: An additional universal cover plate to cover the flue penetration through the internal side of the wall.

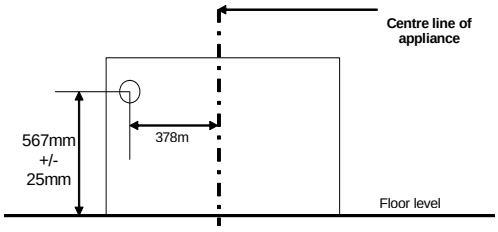
Method

a.) Select the desired location for the heater.

b.) Decide the proposed route of the sideways flue & confirm there are no obstructions to this route.

c.) Ensure the flue will be able to terminate in accordance with AS 5601 (Refer to Appendix A).

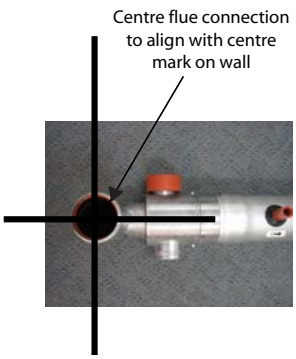
d.) Mark the centre of the heater flue pipe on the rear wall (see diagram).



IMPORTANT

- **Ensure the components of the ‘On Wall’ adaption kit are securely fastened to the transition casting by the screws and rivets. Test soundness of the connections by attempting to ‘pull apart’ the assembled components. Improper or unsound connections can result in products of combustion dispersing into the room being heated which may result in a dangerous condition.**

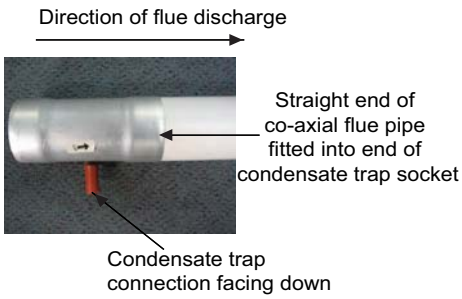
e.) Using the mounting bracket supplied, mount the ‘On Wall’ kit so that the centre of the flue pipes aligns with the markings on the wall using the stand off clip supplied.



SIDEWAYS HORIZONTAL FLUE INSTALLATION

NOTE

- **The 'On Wall' kit can run horizontally to the 'left' or to the 'right' at the rear of the heater as shown in the photo above. In a sideways horizontal flue system the positioning and direction of the condensate trap do not matter as no condensate will be collected and drained. Condensate drainage is ensured by the two degree 'fall' towards the terminal. Condensate trap must still be fitted as part of flue system. Straight end of co-axial flue pipe fits into end of condensate trap socket.**



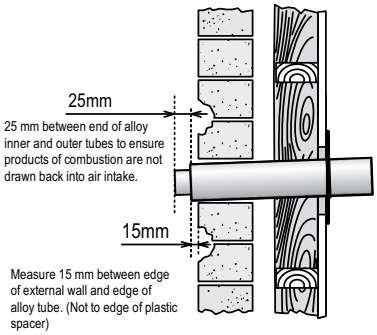
f.) Continue to fit additional lengths of Co-axial flue pipe until the required flue length is obtained.

IMPORTANT

- **Socket end of the Co-axial flue pipe must face the flue termination.**
- **A small amount of 'O' ring grease applied to the seals will aid assembly.**

g.) Mark the last length of the outer flue pipe (larger diameter) allowing 15 mm past the edge of the external wall (see photo).

h.) Mark the last length of inner flue pipe an additional 25 mm in length from the mark on the outer air intake tube (see diagram).



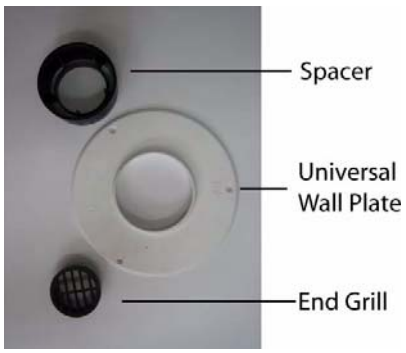
i.) Remove the last length of Co-axial pipe flue assembly from the rest of the assembled flue system.

j.) Using a hacksaw or similar, cut off excess flue length from both the outer and inner pipes of the last length of Co-axial pipe.

k.) Slide the plastic internal wall cover plate from the wall terminal kit (ASPKIT03) over the last flue pipe inside the building (if required).

l.) Pass the last flue pipe (now cut off) through the wall and attach to the rest of the flue assembly. Ensure wall plate location is in centre of hole through wall. Fasten the internal wall plate to the wall through the 3 pre-drilled holes in the cover plate using suitable screws.

m.) Fit the black plastic spacer from the wall terminal kit (ESWTKIT) between the inner and outer pipes of the last length of Co-axial pipe (see photo).



n.) Fit small black plastic flue outlet grill from the wall terminal kit (ESWTKIT) to the innter flue pipe with the bars in a horizontal direction (see photo).

o.) Slide the plastic external wall cover plate over the flue pipes on the outside of the wall, ensuring the "TOP" symbol and mounting screw hole is on the top side of the flue. (This will ensure a 2 degree fall for condensation to run towards the outlet).

SIDEWAYS HORIZONTAL FLUE INSTALLATION

p.) Drill through the hole in the plastic cover plate and into metal air intake pipe. Secure with the stainless steel self-tapping screw supplied to lock the flue terminal in place.

q.) Attach the plastic wall plate to the outer wall through the three countersunk holes moulded into the plastic wall plate using the screws supplied. The finished flue terminal assembly should look like the photo to the right.

r.) Fasten plastic cover plate to the wall with appropriate screws (3 holes).'TOP' symbol to be aligned to the top of external wall plate to ensure 2 degree fall for condensation to run toward outlet of flue terminal. Use fixing screw to lock flue system in place.

s.) Fasten the remaining horizontal Co-axial flue pipes now joined together against the internal wall using the stand off clip supplied with each Co-axial flue pipe.

IMPORTANT

- **It is important that the horizontal Co-axial flue pipes are fastened to the wall using the stand off clips supplied to support the weight of the flue system and prevent accidental dislodgement of pipe joints which could result in a dangerous situation. Otherwise accidental or erroneous dislodgement could occur as a result of future servicing the Aspiration heater or as a result of other activities in the vicinity of the heater or flue system.**

t.) Construct and fit a decorative cover over the horizontal pipe inside the building if required.

IMPORTANT

- **There should be a 25 mm clearance between the outer Co-axial flue pipe and any decorative cover materials.**

u.) Access to the flue connection at the heater

Refer to section "Access to flue connection at the Heater" on page 12.

v.) Connecting and securing metal flue spigot from heater to flue

Refer to section "Connecting and securing metal flue spigot from heater to flue" on page 15.

w.) Connecting air supply elbow and final flue connection

Refer to section "Connecting air supply elbow and final flue connection" on page 15.

IMPORTANT

- **Ensure the flue outlet from the heater is properly secured to the flue connection on the transition casting using the clip and clamp provided. If this joint is not secured properly products of combustion could disperse into the room being heated which may result in a dangerous condition.**
- **Ensure the elbow of the air intake hose is properly secured to the air connection on the flue system transition piece using a cable tie and that the rubber blanking cap is placed over the unused air intake connection of the transition casting.**

DOWN & OUT FLUE INSTALLATION

'Down & Out' Flue Installation - (Page 4 - Option ⓥ)

The 'Down and Out' flue options allows the 'On Wall' kit and condensate trap to face downwards and the flue pipe to be run vertically down through a hole in the floor and then horizontally to a suitable location outside. Flue is not to terminate beneath the building.

Flue must terminate in accordance with AS 5601 Figure 5.3. Especially relevant is the requirement to have a minimum of 300 mm clearance between the flue terminal and ground level. It is not permissible to excavate a hole to obtain the required 300 mm clearance.

IMPORTANT

- **Flue must not terminate under a building.**

NOTE

- **Flue terminal is only available in the horizontal format.**
- **Maximum total flue length not to exceed 6.5 metres and 2 x 90° bends.**
- **The 90° bend incorporated within the 'On Wall' transition is counted as ONE 90° Bend).**

Components Required

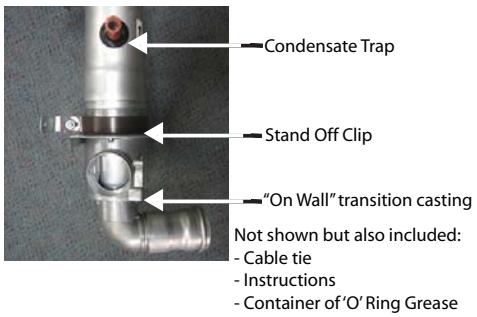
- 'On Wall' Kit - (ASPKIT03)
- Co-axial Flue Pipe(s) - (ESPIPE900)
- Bends - (ESBEND x 2)
- Universal Wall Cover Plate - (ESPLATE)

1. ASPKIT03 Components

The (ASPKIT03) components are shown in the photo.

Additional components which need to be obtained:

- Lengths of Co-axial flue pipe (ESPIPE900)
- Flue terminal (Vertical or Horizontal) (ESROOFCOWL) & (ESWTKIT)
- Universal cover plate (ESPLATE)



Not shown but also included:
- Cable tie
- Instructions
- Container of 'O' Ring Grease

2. Assembly of "On Wall" Adaptation Kit

(Apply light coat of "O" ring seal to "O" rings prior to assembly).

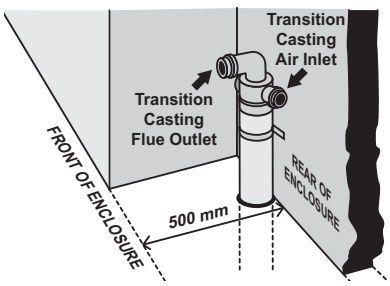
- Assemble components as shown in photo above.

IMPORTANT

- **Ensure the components on the 'On Wall' adaptation kit are securely fastened to the transition casting by the screws and rivets. Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper or unsound connections can result in products of combustion dispersing into the room being heated which may result in a dangerous condition.**

3. 'Down and Out' heater recess dimensions

If the 'Down and Out' flue option is used the recess in which the Rinnai Aspiration heater is installed needs to be 50 mm deeper than the normal installation (500 mm deep instead of 450 mm deep). Refer Rinnai Aspiration heater Operation/ Installation manual for details.



a.) Select the desired location for the heater.

b.) Decide the proposed route of the sideways flue and confirm there are no obstructions to this route, for example, floor joists, bearers, stumps, ductwork etc.

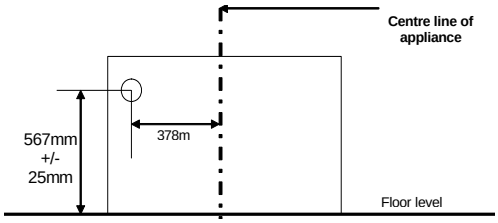
c.) Ensure the flue will be able to terminate in accordance with AS 5601 (Refer to Appendix A). Also ensure there is sufficient clearance beneath the building to obtain a minimum of 300 mm between the bottom of the horizontal flue terminal and the normal ground level.

DOWN & OUT FLUE INSTALLATION

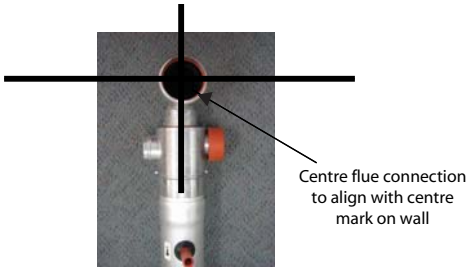
NOTE

- **Ground excavation is not recommended to meet clearance or space requirements unless there is sufficient drainage provision.**

d.) Mark the centre of the heater flue pipe on the rear wall (see photo).



e.) Using the mounting brackets supplied, mount the 'On Wall' kit with so that the centre of the flue pipes aligns with the markings on the wall using the stand off clips supplied. The condensate trap should be pointing towards the floor.
Mark centre of hole through floor directly beneath centre of condensate trap. Cut 100 mm dia. hole through floor.

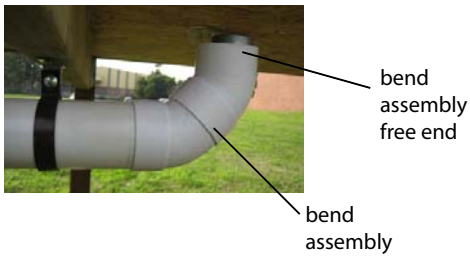


NOTE

- **In 'Down and Out' applications only, the 'up' marking on the condensate trap will point 'down'. This is normal. In a 'Down and Out' application, the positioning and direction of the condensate trap do not matter as no condensate will be collected & drained. Condensate drainage is ensured by the two degree 'fall' towards the terminal.**
- **Condensate trap must still be fitted.**

f.) Fit 2 x 45° bends (ESBEND) together and fit the resulting bend assembly to the 'free' (non socketed) end of a Co-axial flue pipe (ESPIPE900) - see photo.

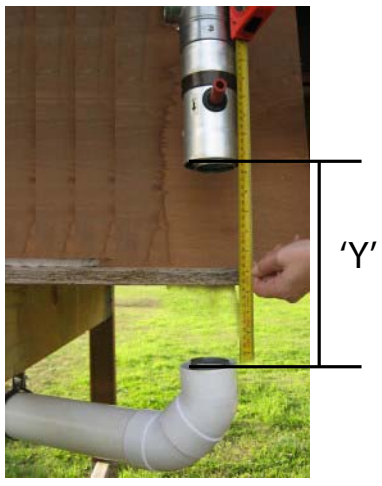
g.) Mount the ESPIPE900 and bends temporarily in the horizontal plane beneath the floor, using the stand off clip for correct spacing under bearers etc. so that the free end of the bend assembly faces vertically up towards the condensate trap (see photo).



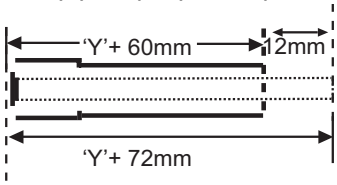
NOTE

- **A small amount of 'O' ring lubricant on rubber seals will assist assembly.**

h.) Measure the vertical distance 'Y' between the free end of the ESBEND's and the condensate trap. This distance will be used to cut a Co-axial pipe (ESPIPE900) to the correct length to join between the free end of the ESBEND and condensate trap - see photo.



i.) Cut an ESPIPE900 to length as follows:
Length of outer pipe is distance 'Y' plus 60 mm to allow for connection penetration to mating part. Ensure the inner pipe extends 12 mm past the outer pipe - ('Y' plus 72).



DOWN & OUT FLUE INSTALLATION

NOTE

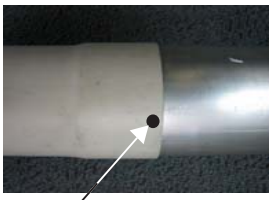
- **Measure from socket end of pipe. Cut pipe and discard 'free' non socketed end.**
- **Cut end to be left smooth.**
- **Ground excavation is not recommended to meet clearance or space requirements unless there is sufficient drainage provision.**
- **A small amount of 'O' ring lubricant on rubber seals will assist assembly.**

j.) Assemble vertical 'Down' section of the flue with the STRAIGHT END of the ESPIPE900 fitted to the end of the condensate trap.

k.) Fit ESPLATE over vertical 'Down' section to seal gap in floor. Ensure that the 'Down' section of flue is centered within the 100 mm hole through floor. Screw ESPLATE to floor.

l.) Attach ESBENDS beneath floor so the socket ends face toward the flue terminal. Fit stand off-clip to secure vertical 'Down' section of pipe in place.

m.) Secure the socket joints between the condensate trap, vertical section of ESPIPE900 and the 2 bends. Use a screw or pop rivet to prevent accidental dislodgement.



Pop rivet or 12 mm self tapping screw

n.) Install horizontal 'Out' section of flue using ESPIPE900 as required. Pipe must be installed so there is a 2° fall toward the flue terminal.

o.) Fit stand-off clips to secure horizontal sections of ESPIPE900 in correct location.

p.) Continue until ESPIPE900 emerges from beneath the house.

IMPORTANT

- **Pop rivet(s), self tapping screw(s) are fitted to prevent accidental or erroneous dislodgement which could result in a dangerous situation. Accidental or erroneous dislodgement could occur as a result of future servicing the Aspiration heater or as a result of other activities in the vicinity of the heater or flue system.**
- **Stand off clips support the weight of the flue and also prevent accidental dislodgement.**

4. Creating a horizontal flue terminal at the end of a horizontal Co-axial flue pipe

Components

- Wall Terminal Kit (ESWTKIT)
- Co-axial flue pipe (ESPIPE900)

Method

a.) Ensure location selected complies with the requirements of AS 5601 Figure 5.3 (Reproduced in Appendix A).

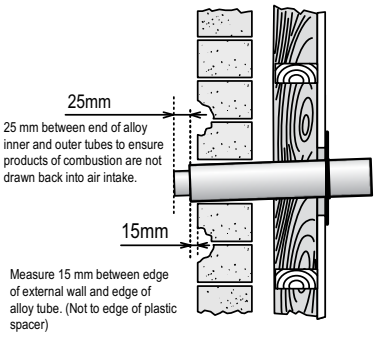
b.) Cut outer length of air supply tube (socket end) so it protrudes past external wall by 15 mm.

c.) Cut inner flue pipe so it protrudes past the end of the air supply tube by 25 mm.

d.) Fit inner flue spacer.

e.) Fit Wall plate.

f.) Gently tap in flue grill into small flue pipe.



g.) Centre plastic wall plate and fasten to wall with the screws provided. 'TOP' symbol of wall plate should be facing upwards to ensure a 2° fall toward the flue terminal is maintained to allow any condensation to drain away from the heater.

h.) Drill hole through lip of wall plate through outer air pipe and plastic spacer and secure with stainless steel fixing screws provided.

IMPORTANT

- **The plastic cover plate must be secured by the screws as shown to prevent possible accidental dislodgement which could result in a dangerous situation. For additional security it is recommended that the optional 'flue guard' is fitted over the flue terminal.**

5. Access to the flue connection at the heater

Refer to section "Access to flue connection at the Heater" on page 12.

6. Connecting and securing metal flue spigot from heater to flue

Refer to section "Connecting and securing metal flue spigot from heater to flue" on page 15.

5. Connecting air supply elbow and final flue connection

Refer to section "Connecting air supply elbow and final flue connection" on page 15.

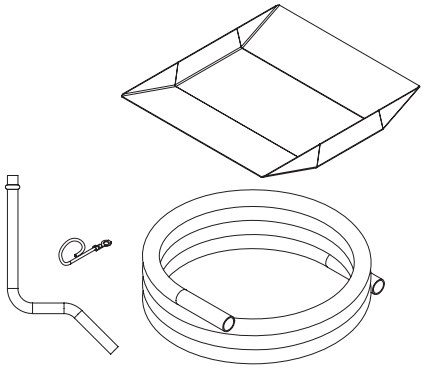
CONNECTING THE CONDENSATE DRAIN HOSE

1. Condensate Kit

The condensate tray will be supplied with the 'Stand Off' wall bracket and must be fitted as per the supplied instructions in conjunction with every condensate trap.

Condensate tray components:

- Condensate Tray
- Condensate Tube
- Condensate Hose
- Wire tie



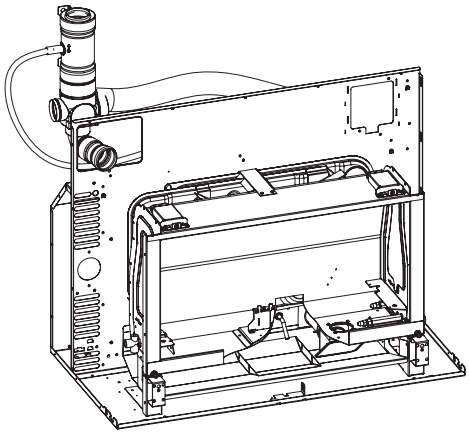
2. Connection of condensate hose to condensate trap

The free end of the clear plastic condensate drain hose located at the rear of the heater is required to be fitted to the red rubber connection on the condensate trap of the flue system.

Push end of clear plastic hose inside the red rubber connection on the condensate trap.

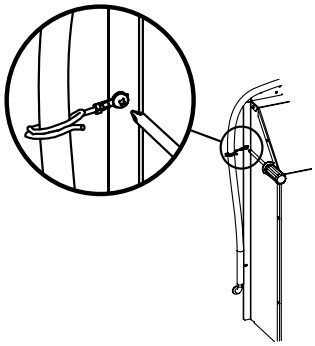
Push fully in until clear plastic hose reaches the end of the red rubber connection point.

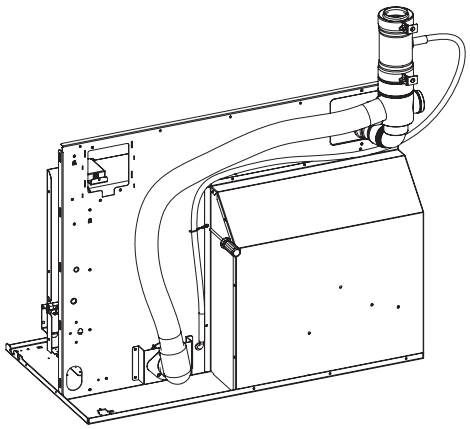
With 'On Wall' vertical flue installations (Page 4 - Option ⑪) condensate is discharged to the condensate tray via the drain hose.



IMPORTANT

- **Ensure that there is no kink in the condensate hose and keep away from hot surfaces.**



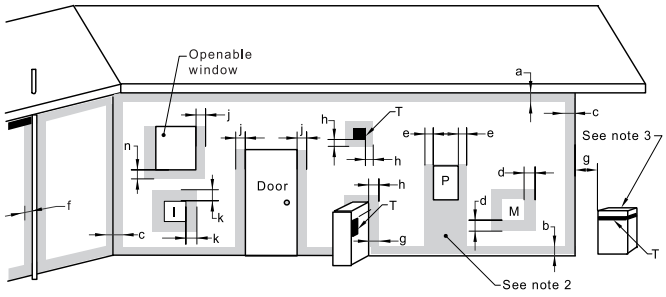


IMPORTANT

- **Only the flue system components designated in this manual must be used. Components not designated in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.**

CLEARANCES

Appendix 'A'- Horizontal and Vertical flue terminal clearances - Extracts from AS 5601:2004.



LEGEND:

T = Flue terminal
I = Mechanical air inlet
M = Gas meter
P = Electricity meter or fuse box
Shading indicates prohibited areas for flue terminals

Ref.	Item	Minimum clearances (mm)	
		Natural draft	Fan assisted
a	Below eaves, balconies and other projections:		
	• Appliances up to 50 MJ/h input	300	200
	• Appliances over 50 MJ/h input	500	300
b	From the ground, above a balcony or other surface †	300	300
c	From a return wall or external corner †	500	300
d	From a gas meter (M) (see 4.7.11 for vent terminal location of regulator)	1000	1000
e	From an electricity meter or fuse box (P)	500	500
f	From a drain pipe or soil pipe	150	75
g	Horizontally from any building structure † or obstruction facing a terminal	500	500
h	From any other flue terminal, cowl, or combustion air intake †	500	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Appliances up to 150 MJ/h input	500	300
	• Appliances over 150 MJ/h input up to 200 MJ/h input	1500	300
	• Appliances over 200 MJ/h input up to 250 MJ/h input †	1500	500
	• Appliances over 250 MJ/h input †	1500	1500
	• All fan-assisted flue appliances, in the direction of discharge	-	1500
k	From a mechanical air inlet, including a spa blower	1500	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Space heaters up to 50 MJ/h input	150	150
	• Other appliances up to 50 MJ/h input	500	500
	• Appliances over 50 MJ/h input and up to 150 MJ/h input	1000	1000
	• Appliances over 150 MJ/h input	1500	1500

† Unless appliance is certified for closer installation

All distances are measured to the nearest part of the terminal.

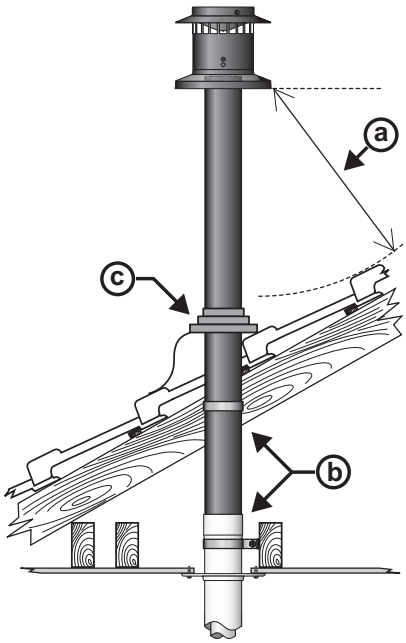
Prohibited area below electricity meter or fuse box extends to ground level.

See Clause 5.13.6.6 for restrictions on a flue terminal under a covered area.

See Appendix J, Figures J2(a) and J3(a), for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.

For appliances not addressed above acceptance should be obtained from the technical regulator

FIGURE 5.3 (in part) MINIMUM CLEARANCES REQUIRED FOR BALANCED FLUE TERMINALS, FAN-ASSISTED FLUE TERMINALS, ROOM-SEALED APPLIANCE TERMINALS OR THE TERMINALS OF OUTDOOR APPLIANCES



(a) Minimum clearance 500 mm to nearest part of roof.

(b) Minimum clearance 25mm to combustible materials.

(c) Decktite or lead collar flashing.

NOTE

- **AS 5601-2004 was current at the time of printing but may have been superseded.**
  It is the Installer's responsibility to ensure that requirements of the current version of AS 5601 are met.

NOTES

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